

**What is claimed is:**

1. A lens zone exhibiting a depth of focus comprising a refractive power profile configured such that said depth of focus is at least 1.1 diopters for light of 550 nm wavelength, and wherein the area of said lens zone is at least  $3.14 \text{ mm}^2$ .
2. A lens zone according to claim 1, wherein the refractive power profile is configured such that the intensities within the depth of focus are at least 50 % of the peak intensity within the depth of focus.
3. A lens zone according to claim 1, wherein the refractive power profile is configured such that the lens zone is a multifocal lens zone with at least two powers and wherein at least one of the powers exhibits said depth of focus.
4. A lens zone according to claim 1, wherein said lens zone is an annular lens.
5. A lens zone according to claim 1, wherein said lens zone is a circular lens.
6. A lens zone according to claim 1, wherein the power profile comprises an approximation of a combination of at least one constant function and a fraction of a period of a sinusoidal function.
7. A lens exhibiting a large depth of focus comprising:  
  
at least two lens zones each lens zone having a refractive power profile wherein the depth of focus is at least 1.1 diopters for light of 550 nm wavelength and further wherein the area of each of said lens zones is at least  $3.14 \text{ mm}^2$ , and wherein optical path length differences are provided between adjacent lens zones such that light rays passing through adjacent lens zones have optical path lengths between an object point and an image point which are different by at least a coherence length of light, which is at least  $1 \text{ }\mu\text{m}$ .
8. A lens according to claim 7, wherein the refractive power profiles of the lens zones are identical.

9. A lens according to claim 7, wherein the refractive power profiles of the lens zones are different.

10. A lens according to claim 7, wherein the each of the lens zones exhibits refractive power profiles exhibiting at least two powers and wherein at least one of the powers exhibits said depth of focus.

11. A lens according to claim 7, wherein the areas of all of the lens zones are equal.

12. A lens according to claim 7, wherein the areas of all of the lens zones are different.

13. A lens according to claim 7, wherein the lens is an ophthalmic lens.

14. A lens according to claim 7, wherein the lens is a contact lens.

15. A lens according to claim 7, wherein the lens is an intra-ocular lens.

16. A lens exhibiting a depth of focus comprising:

at least two lens zones including a central circular lens zone and at least one annular lens zone surrounding the central circular lens zone, all lens zones configured such that light rays passing through adjacent lens zones have an optical path length between an object point and an image point which are different by at least a coherence length of light, passing through which is at least 1  $\mu\text{m}$ , wherein the area of any of said lens zones is at least 3.14  $\text{mm}^2$  and wherein the lens zones are given refractive power profiles such that the depth of focus of any of the lens zones is at least 1.1 diopters for light of 550 nm wavelength.

17. A lens according to claim 16, wherein the refractive power profiles of all lens zones are equal.

18. A lens according to claim 16, wherein the refractive power profiles of each of the lens zones are different.

19. A lens according to claim 16, wherein the areas of all lens zones are equal.

20. A lens according to claim 16, wherein the areas of each of the lens zones are different.

21. A lens according to claim 16, wherein the shape of the through focus response of any of the lens zones is substantially identical with the shape of the through focus response of the entire lens.

22. A lens according to claim 16, wherein the lens is an ophthalmic lens.

23. A lens according to claim 16, wherein the lens is a contact lens.

24. A lens according to claim 16, wherein the lens is an intra-ocular lens.

25. A lens according to claim 16, wherein the lens is a intra-corneal lens.